

WHAT IS CLAIMED IS:

1. A file management method having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to another write area is carried out to write the data in the another area, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to another write area is not carried out to write the data, said recording medium storing file type information for discrimination between said first and second processing modes in said recording medium as file management information associated with said file for file management, said method includes the steps of:

reading a file type associated with a file to be processed from the recording medium;

converting said file type from the file type indicative of said first processing mode to a file type indicative of said second processing mode; and

writing the file type information after the conversion in the recording medium as file management information associated with said file to be processed.

2. A file management method as set forth in claim 1, wherein said replacement processing is carried out on an ECC block basis, said block including N recording units termed as sectors (N: positive integer), and further comprising steps of:

judging whether or not said data belonging to said file to be processed is stored in all the N sectors of said ECC block; and

when judging that the data is not stored in the ECC block, registering in said file management information as a stuffing a sector termed as a remaining sector within the ECC block having the data of the file to be processed stored therein, data of the file to be processed being not stored in said remaining sector.

3. A file management method as set forth in claim 2, further comprising steps of:

judging whether or not data, termed as other data, belonging to a file, termed as another file, other than said file to be processed is stored in said remaining sector;

when judging that the other data is stored in the remaining sector, moving said other data to another ECC block other than said ECC block; and

reflecting a result of said movement in file management information for management of said other file.

4. A file management method as set forth in claim 2, further comprising steps of:

judging whether or not data belonging to a file other than said file to be processed is stored in said remaining sector;

when judging that the data is stored in said

remaining sector, moving the data belonging to said file to be processed on a basis of an ECC block different from said ECC block; and

reflecting a result of said movement in the file management information for management of said file to be processed.

5. A file management method as set forth in claim 3, wherein said step of reflecting the result of said movement includes:

deleting first data allocation information indicative of a data storage location on the recording medium prior to said movement in said file management information; and

registering second data allocation information indicative of a data storage location on the recording medium after said movement in said file management information.

6. A file management method as set forth in claim 1, further comprising a step of setting a flag for inhibiting relocation of the file to be processed is set in said management information.

7. A file management method having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to another write area is carried out to write the data in the another area, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the

recording medium, replacement processing to the another write area is not carried out to write the data, and wherein said replacement processing is carried out on a basis of an ECC block including N recording units (N: positive integer) termed as sectors, said method comprising the steps of:

reading data stored at a recording location after said replacement processing; and

writing said data in the recording location prior to said replacement processing.

8. A file management method having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to another write area is carried out to write the data in the another area, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, the replacement processing to another write area is not carried out to write the data, said recording medium storing file type information for discrimination between said first and second processing modes in said recording medium as file management information associated with said file for file management, said method comprising the steps of:

judging without using said file type information whether or not said file to be processed is read in said second processing mode;

when judging by said judgement step that said

file to be processed is read, reading the data in said second processing mode; and

when judging by said judgement step that said file to be processed is not read, reading the data in said first processing mode.

9. A file management apparatus having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to another write area is carried out to write the data in the another area, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to another write area is not carried out to write the data, said recording medium storing file type information for discrimination between said first and second processing modes in said recording medium as file management information associated with said file for file management, said apparatus comprising:

means for reading a file type information associated with a file to be processed from the recording medium;

means for converting said file type from the file type indicative of said first processing mode to a file type indicative of said second processing mode; and

means for writing the file type after the conversion in the recording medium as file management

information associated with said file to be processed.

10. A file management apparatus as set forth in claim 9, wherein said replacement processing is carried out on an ECC block basis, said block as a recording unit including N (N: positive integer) sectors, and further comprising:

means for judging whether or not said data belonging to said file to be processed is stored in all the N sectors of said ECC block; and

when said judging means judges that the data is not stored in the ECC block, means for registering one (referred to as the remaining sector) of the sectors in the ECC block having the data of the file to be processed stored therein where the data is not stored as a stuffing in said file management information.

11. A file management apparatus as set forth in claim 10, further comprising:

means for judging whether or not data (referred to as other data) belonging to a file other than said file to be processed is stored in said remaining sector;

when said judging means judges that the other data is stored in the remaining sector, means for moving said other data to another ECC block other than said ECC block; and

means for reflecting a result of said movement in file management information for management

of said other file.

12. A file management apparatus as set forth in claim 10, further comprising:

means for judging whether or not data belonging to a file other than said file to be processed is stored in said remaining sector; when said judging means judges that the data is stored in said remaining sector, means for moving the data belonging to said file to be processed on a basis of an ECC block different from said ECC block; and

means for reflecting a result of said movement in the file management information for management of said file to be processed.

13. A file management apparatus as set forth in claim 11, wherein said means for reflecting the result of said movement includes:

means for deleting first data allocation information indicative of a data storage location on the recording medium prior to said movement in said file management information; and

means for registering second data allocation information indicative of a data storage location on the recording medium after said movement in said file management information.

14. A file management apparatus as set forth in claim 9, further comprising means for setting a flag for inhibiting relocation of the file to be processed

is set in said management information.

15. A file management apparatus having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to another write area is carried out to write the data in the another area, and has a second processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, the replacement processing to another write area is not carried out to write the data, and wherein said replacement processing is carried out on a basis of an ECC block including N recording units (N: positive integer) termed as sectors, said apparatus comprising:

means for reading data stored at a recording location after said replacement processing; and

means for writing said data in the recording location prior to said replacement processing.

16. A file management apparatus having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to another write area is carried out to write the data in the another area, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to another write area is not carried out to write the data, said recording medium storing file type information for

discrimination between said first and second processing modes in said recording medium as file management information associated with said file for file management, said apparatus comprising:

means for judging without using said file type information whether or not said file to be processed is read in said second processing mode;

when said judging means judges that said file to be processed is read, means for reading the data in said second processing mode; and

when said judging means judges that said file to be processed is not read, means for reading the data in said first processing mode.

17. A program having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to another write area is carried out to write the data in the another area, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to another write area is not carried out to write the data, said recording medium storing file type information for distinction between said first and second processing modes in said recording medium as file management information associated with said file for file management, said program for causing a computer to execute the steps:

reading a file type information associated

with a file to be processed from the recording medium; converting said file type from the file type indicative of said first processing mode to a file type indicative of said second processing mode; and writing the file type after the conversion in the recording medium as file management information associated with said file to be processed.

18. A program as set forth in claim 17, wherein said replacement processing is carried out on an ECC block basis, said block as a recording unit including N (N: positive integer) sectors, said program for causing a computer to execute the steps of:

judging whether or not said data belonging to said file to be processed is stored in all the N sectors of said ECC block; and

when said judging step judges that the data is not stored in the ECC block, registering one (referred to as the remaining sector) of the sectors in the ECC block having the data of the file to be processed stored therein where the data is not stored as a stuffing in said file management information.

19. A program as set forth in claim 18, further for causing a computer to execute the steps of:

judging whether or not data (referred to as other data) belonging to a file other than said file to be processed is stored in said remaining sector;

when said judging step judges that the other data is stored in the remaining sector, moving said

other data to another ECC block other than said ECC block; and

reflecting a result of said movement in file management information for management of said other file.

20. A program as set forth in claim 18 for causing a computer to execute further steps of:

judging whether or not data belonging to a file other than said file to be processed is stored in said remaining sector;

when said judging step judges that the data is stored in said remaining sector, moving the data belong to said file to be processed on a basis of an ECC block different from said ECC block; and

reflecting a result of said movement in the file management information for management of said file to be processed.

21. A program as set forth in claim 19 for causing a computer to execute said step of reflecting the result of said movement further including:

deleting first data allocation information indicative of a data storage location on the recording medium prior to said movement in said file management information; and

registering second data allocation information indicative of a data storage location on the recording medium after said movement in said file management information.

22. A program as set forth in claim 17, for causing a computer to execute further a step of setting a flag for inhibiting relocation of the file to be processed is set in said management information.

23. A program which has a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to another write area is carried out to write the data in the another area, and has a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to another write area is not carried out to write the data, and wherein said replacement processing is carried out on a basis of an ECC block including N recording units (N: positive integer) termed as sectors, said program for causing a computer to execute steps of:

reading data stored at a recording location after said replacement processing; and

writing said data in the recording location prior to said replacement processing.

24. A program having a first processing mode wherein, when data in the form of a file is written on a recording medium and a write error occurs, replacement processing to another write area is carried out to write the data in the other area, and having a second processing mode wherein, when the write error occurs, the replacement processing to the other write

area is not carried out to write the data, for storing a file type for distinction between said first and second processing modes in said recording medium as file management information associated with said file for file management, said program for causing a computer to execute the steps of:

judging without using said file type whether or not said file to be processed is read in said second processing mode;

when said judging step judges that said file to be processed is read, reading the data in said second processing mode; and

when said judging step judges that said file to be processed is not read, reading the data in said first processing mode.

25. A file management method having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to another write area is carried out to write the data in another area, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to another write area is not carried out to write the data, said recording medium storing file type information for discrimination between said first and second processing modes in said recording medium as file management information associated with said file for file

management, said method comprising the step of:

regarding the file type of a file to be processed as said second processing mode regardless of said file type and reading the data in said second processing mode.

26. A file management apparatus having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to another write area is carried out to write the data in the another area, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to another write area is not carried out to write the data, said recording medium storing file type information for discrimination between said first and second processing modes in said recording medium as file management information associated with said file for file management, said apparatus comprising:

means for regarding the file type of a file to be processed as said second processing mode regardless of said file type and reading the data in said second processing mode.

27. A program having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to another write area is carried out to write the data in the another area, and having a second

processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to another write area is not carried out to write the data, said recording medium storing file type information for discrimination between said first and second processing modes in said recording medium as file management information associated with said file for file management, said program for causing a computer to execute the step of:

regarding the file type of a file to be processed as said second processing mode regardless of said file type and reading the data in said second processing mode.

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